



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,855	11/19/2003	Francois Kubica	245493US41X CONT	5604
22850	7590	03/31/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			NGUYEN, THU V	
			ART UNIT	PAPER NUMBER
			3661	
DATE MAILED: 03/31/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/715,855

Applicant(s)

KUBICA, FRANCOIS

Examiner

Thu Nguyen

Art Unit

3661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 09/863,894.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/17/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The amendment filed on December 28, 2004 has been entered. By this amendment, claims 21-30 have been added and claims 1-30 are now pending in the application. The terminal Disclaimer submitted on December 28, 2004 has been accepted.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 21-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. In claim 21, line 7, the claimed limitation “a single function is embedded in the flight control computer” is ambiguous. The meaning of the expression “function” is ambiguous. It is not clear if the “function” means a “device” implemented in the flight control computer or if the “function” means just one “duty” or one “control” is performed in the flight computer.
- b. Other claims are rejected as being dependent on the rejected base claim.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pages (US 5,774,818) in view of Trikha (US 6,003,811).

As per claim 1-2, 6, 11, Pages teaches a system for operating an aircraft, the system comprising: a navigation computer 12 (fig.4) and a flight control computer 13 (fig.4). The navigation computer 12 (fig.4) comprises: a first input (from 16 (fig.4)) to receive guidance instruction (col.5, lines 22-35); a second input (from 15 (fig.4)) configured to receive guidance parameters (col.5, lines 36-38); an output (to PA 13 (fig.4)) to output automatic pilot instruction (col.5, lines 43-46). The flight control computer comprises: a second input generator (connected to 12 (fig.4)) to receive to receive automatic pilot instructions (col. 5, lines 43-46); a command generator to generate a first plurality of operating commands based on the automatic pilot instructions in an automatic pilot mode (col.5, lines 47-52). Pages does not explicitly disclose a first input of the flight control computer 13 (fig.4). However, Pages teaches an interface 18 (fig.4) capable of displaying suggestion to the user of the control the pilot should make, and in manual mode, the pilot can input such the control according to the suggestion (col.5, lines 52-55; col. 4, lines 51-54). Further, Trikha teaches a known flight control computer 26 (fig.1) capable of processing both manual input 18 (fig.1) and autopilot input 25 (fig.1) control instructions. It

would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the first manual input interface taught by Trikha to the flight control computer 13 (fig.4) of Pages in order to allow the flight control computer to provide commands to the actuators according to the manual input data.

As per claim 3, Pages teaches a third input (from 15 (fig.4)) for receiving control parameters (col.5, lines 47-49).

As per claim 4-5, Pages teaches a single control function 13 (fig.4) embedded in the flight control computer 13 (fig.4).

As per claim 7, since Trikha teaches a flight control computer using either the input from the autopilot or the manual control for determining desired actuator surface commands (col.3, lines 7-24), the inputs from the automatic device and from the manual device would obviously correspond in nature so that alternate input data can be used in determining the actuator surface command.

As per claim 8-10, Trikha teaches providing control instructions including desired change in the aircraft flight path (col.3, lines 7-10), further, using vertical load factor, roll rate, yaw as parameters reflecting the flight path would have been well known. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use parameters such

as vertical load factor, roll rate, and yaw as indication in the change of the flight path in the system of Pages in order to facilitate calculating desired control to the airplane surfaces using the direct control parameters such as the vertical load factor, etc.

As per claim 12-30, refer to claims 1-11 above. Further with respect to claim 21, Pages disclose one function PA 13 (fig.4) in the flight control computer.

Response to Arguments

5. Applicant's arguments filed on December 28, 2004 have been fully considered but they are not persuasive.

In response to applicant's argument on page 10, lines 1-10 and last paragraph through page 11, lines 1-5, and page 11, last two paragraphs, independent claims as well as applicant remarks in this section do not highlight the difference between the "automatic pilot instruction" of the present invention and the "automatic pilot instruction" taught by Pages in col.5, lines 26-42. The computer 12 (fig.4) of Pages automatically determining the path to be followed and output the calculated path R_n with the next point P_n to be reached (pages col.5, lines 27-46), the calculated path is read as the "automatic pilot instruction" taught in claim 1, line 5. The flight control computer 13 (fig.4) uses the automatic calculated path instruction sent from the computer 12 (fig.4) to determine the control command to the surface actuators (pages col.5, lines 47-50). The specification page 6, lines 8-13 of the present application teaches that the navigation computer 9A (fig.1) calculates guidance instruction such as headings, altitude, etc. and the flight

control computer 3 (fig.3) uses the headings, altitude, etc. to determines the automatic commands for the control surfaces. The teaching of Pages seems to match with the teaching disclosed in page 6, lines 8-13 of the present application. While Pages does not explicitly disclose calculating the headings, altitude, etc (the independent claims do not claim or define the automatic pilot instruction being headings and altitude neither), Pages teaches providing the next point to be reached (col.5, line 39-42) to the flight control computer 13 (fig.4); it is well known that when the path and the future point to be reached is known, the heading and the altitude of the aircraft should inherently be available because the path point should be expressed in coordinate values, and from the future coordinate and the present location, the heading and altitude of the aircraft should be known. The flight control computer 13 (fig.4) of Pages uses the "automatic pilot instructions" 12 (fig.4), specifically, the future path and the next point to be reached, to determine the command to the aircraft surfaces (pages col.5, lines 47-52). Concerning applicant's assertion in page 11, second paragraph, applicant does not explicitly explain why the component taught by Pages is not the components as claimed in the present application.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

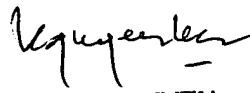
the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Nguyen whose telephone number is (703) 306-9130. The examiner can normally be reached on T-F (7:30-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on (703) 305-8233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 14, 2005


THU V. NGUYEN
PRIMARY EXAMINER